

We claim:

1. A transdermal drug delivery device comprising:
 - a) a reservoir comprising a pharmaceutically active agent; and
 - b) a multilayer polymeric film backing, comprising:
 - i) an outer shell layer and an inner shell layer, wherein at least one of the shell layers comprises a polymer selected from the group consisting of a homopolymer of polypropylene, a copolymer of polypropylene, a homopolymer of poly-4-methyl-1-pentene, a copolymer of poly-4-methyl-1-pentene, and a blend thereof; and
 - ii) an inner core between the outer shell layer and the inner shell layer comprised of 11 or more alternating layers of a thermoplastic elastomer and an olefinic polymer, wherein the weight ratio of thermoplastic elastomer to olefinic polymer in the core is below about 85:15 and above about 5:95,
wherein the inner shell layer is adjacent to the reservoir and interposed between the outer shell layer and the reservoir.
2. A transdermal drug delivery device according to claim 1 wherein the thermoplastic elastomer is a block or graft copolymer
3. A transdermal drug delivery device according to claim 2 wherein the thermoplastic elastomer is a styrenic block copolymer.
4. A transdermal drug delivery device according to claim 1 wherein the olefinic polymer of the inner core is a homopolymer or copolymer of polypropylene.
5. A transdermal drug delivery device according to claim 1 wherein the olefinic polymer of the inner core is a homopolymer or copolymer of polyethylene.
6. A transdermal drug delivery device according to claim 1 wherein the total thickness of the multilayer polymeric film backing is between about 50 and about 100 μm .
7. A transdermal drug delivery device according to claim 1 wherein the reservoir further comprises a skin penetration enhancer or solubilizer.
8. A transdermal drug delivery device according to claim 1 wherein the oxygen transmission rate of the multilayer polymeric film backing is between about 400 and about 4000 $\text{cm}^3/\text{m}^2/\text{day}$.
9. A transdermal drug delivery device according to claim 1 wherein inner shell layer adjoins the reservoir.
10. A transdermal drug delivery device according to claim 1

wherein the ratio of the total thickness of the shell layers to the total thickness of the inner core layers is between about 1:5 and about 1:50.

- 5 11. A transdermal drug delivery device according to claim 1 wherein the moisture vapor transmission rate of the multilayer polymeric film backing is between about 5 and about 25 g/m²/day.
12. A transdermal drug delivery device according to claim 1 wherein the weight ratio of thermoplastic elastomer to olefinic polymer in the core is below about 70:30 and above about 10:90.
- 10 13. A transdermal drug delivery device according to claim 1 wherein the inner core between the outer shell layer and the inner shell layer comprises between about 11 and about 61 alternating layers of a thermoplastic elastomer and an olefinic polymer.
14. A transdermal drug delivery device according to claim 1 wherein at least one of the shell layers comprises a homopolymer or copolymer of polypropylene.
15. A transdermal drug delivery device according to claim 14 wherein the thermoplastic elastomer is a styrenic block copolymer.
16. A transdermal drug delivery device according to claim 15 wherein both shell layers comprise a homopolymer or copolymer of polypropylene.
17. A transdermal drug delivery device comprising:
 - a) a reservoir comprising a pharmaceutically active agent; and
 - 20 b) a multilayer polymeric film backing, comprising:
 - i) an outer shell layer and an inner shell layer, wherein at least one of the shell layers comprises a homopolymer or copolymer of polypropylene; and
 - ii) an inner core between the outer shell layer and the inner shell layer comprised of between about 11 and about 61 alternating layers of a thermoplastic elastomer and an olefinic polymer, wherein the weight ratio of thermoplastic elastomer to olefinic polymer in the core is below about 85:15 and above about 5:95, wherein the inner shell layer is adjacent to the reservoir and interposed between the outer shell layer and the reservoir, and wherein the oxygen transmission rate of the multilayer polymeric film backing is between about 400 and about 4000 cm³/m²/day.
- 25 30 18. A method of drug delivery to a mammal comprising:
 - a) providing a reservoir comprising a pharmaceutically active agent;
 - b) providing a multilayer polymeric film backing, comprising:

- i) an outer shell layer and an inner shell layer, wherein at least one of the shell layers comprises a homopolymer or copolymer of polypropylene; and
 - ii) an inner core between the outer shell layer and the inner shell layer comprised of 11 or more alternating layers of a thermoplastic elastomer and an olefinic polymer, wherein the weight ratio of thermoplastic elastomer to olefinic polymer in the core is below about 85:15 and above about 5:95;
- 5 c) placing the reservoir in a diffusional relationship to an external skin surface of the mammal;
- d) protecting the reservoir for a period of time sufficient to provide a therapeutic effect 10 by placement of the multilayer polymeric film backing, such that the reservoir is interposed between the skin surface and the inner shell layer of the backing; and
- e) allowing the reservoir to remain in a diffusional relationship to the skin for a period of time sufficient to provide a therapeutic effect resulting from delivery of the active agent.
- 15 19. A method of drug delivery according to claim 18, wherein the reservoir and multilayer polymeric film backing are assembled in the form of a transdermal drug delivery device prior to placement of the reservoir in a diffusional relationship to the skin.
20. A method of drug delivery according to claim 19, wherein the reservoir further comprises a skin penetration enhancer or solubilizer.

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